

II. AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior versions, and listings, of claims in the application.

LISTING OF THE CLAIMS

1. (Currently Amended) A method of separating a selected ionic protein component of interest from a sample component using an ionic a selective cation-exchange adsorbent in the absence of an additional salt that binds with the ionic adsorbent having a sufficiently low ionic charge density to ionically bind selectively with the ionic protein component of interest which comprises the steps of:

(a) contacting the sample component containing the selected ionic protein component of interest with an a selective cation-exchange ionic adsorbent having a sufficiently low ionic charge density that selectively binds to the selected ionic protein component of interest in the absence of an additional salt that binds with the ionic adsorbent, wherein the ionic charge density of the ionic cation-exchange adsorbent is 10 to 100 μ mol/ml; and

(b) ionically binding the selected ionic protein component of interest from the sample component with the selective ionic adsorbent.

2. (CURRENTLY AMENDED) A The method according to claim 1, wherein the selective ionic adsorbent is a cation-exchange adsorbent.

3. (CURRENTLY AMENDED) A The method according to claim 1, wherein the selective ionic adsorbent comprises a sulphopropyl group.

4. (CANCELED)

5. (CURRENTLY AMENDED) A The method according to claim 1, wherein the sample component comprises an additional ionic protein component, and wherein the ionic charge density of the selective cation-exchange ionic adsorbent is selected such that only the selected additional ionic protein component is not ionically bound to the selective cation-exchange ionic adsorbent.

6. (CANCELED)

7. (CURRENTLY AMENDED) A The method according to claim 6, wherein the ionic protein component of interest is an immunoglobulin.

8. (CURRENTLY AMENDED) A The method according to claim 6 5, wherein the sample comprises, in addition to the additional ionic protein component is protein A.

9. (CURRENTLY AMENDED) A The method according to claim 4 8, which further comprises (c) washing the selective cation-exchange adsorbent with a buffered solution to remove unbound components, and

(d) applying a salt gradient of increasing conductivity to the selective cation-exchange adsorbent and eluting the ionically bound ionic protein component of interest from the selective cation-exchange adsorbent.

10. (CURRENTLY AMENDED) A The method according to claim 4 2, wherein the ionic charge density of the selective cation-exchange ionic adsorbent is from 20 to 90 μ mol/ml.

11. (CURRENTLY AMENDED) A The method according to claim 4 2, wherein the ionic charge density of the selective cation-exchange ionic adsorbent is from 30 to 80 μ mol/ml.

12. (CURRENTLY AMENDED) A method of separating a selected first ionic polymeric protein compound of interest from a sample having at least two one additional different ionic polymeric protein compounds using an ionic a selective cation-exchange adsorbent having a sufficiently low ionic charge density to ionically bind to the first ionic protein compound of interest in the absence of an additional salt that binds with the ionic adsorbent, comprising the steps of:

(a) contacting the sample having at least two different first and second ionic polymeric protein compounds with an ionic a selective cation-exchange adsorbent having an ionic charge density from 10 to 100 μ mol/ml; in the absence of an additional salt that binds with the ionic adsorbent, wherein the ionic charge density of the ionic cation-exchange adsorbent is selected such that only the selected first ionic polymeric protein compound of interest is bound binds to the ionic cation-exchange adsorbent and the second different ionic protein compound is unbound to the cation-exchange adsorbent,

(b) washing the cation-exchange adsorbent with a buffered solution to remove the unbound second different ionic protein compound, and

(c) applying a salt gradient of increasing conductivity to the cation-exchange adsorbent and eluting the ionically bound first ionic protein compound of interest from the cation-exchange adsorbent.

13. (CURRENTLY AMENDED) The method according to claim 12, wherein the ionic cation-exchange adsorbent has an ionic charge density from 20 to 90 $\mu\text{mol}/\text{ml}$ and comprises a sulphopropyl group.

14. (CURRENTLY AMENDED) The method according to claim 12, wherein the ionic cation-exchange adsorbent is a cation-exchange adsorbent has an ionic charge density from 30 to 80 $\mu\text{mol}/\text{ml}$ and comprises agarose beads having sulphopropyl groups.

15. (CURRENTLY AMENDED) A method of separating a protein A component from an immunoglobulin G component in a selected ionic biomolecule from a sample component having at least two ionic biomolecules using an ionic a selective cation-exchange adsorbent having sulphopropyl groups in the absence of an additional salt that binds with the ionic adsorbent, comprising the steps of:

(a) contacting the sample component comprising protein A and immunoglobulin G components having the at least two ionic biomolecules with an ionic a selective cation-exchange adsorbent in the absence of an additional salt that binds with the ionic adsorbent having an ionic charge density from 10 to 100 $\mu\text{mol}/\text{ml}$ to ionically bind to the immunoglobulin G component, wherein the charge density of the ionic adsorbent is selected such that only the selected ionic biomolecule is bound to the ionic adsorbent and

(b) washing the selective cation-exchange adsorbent with a buffered solution to remove any unbound components.

16. (CURRENTLY AMENDED) The method according to claim 15, which further comprises (c) applying a salt gradient of increasing conductivity to the selective cation-exchange adsorbent, and eluting the bound immunoglobulin G component bound selected ionic biomolecule from the selective cation-exchange adsorbent.

17. (CANCELED)

18. (CURRENTLY AMENDED) The method according to claim 15, wherein the ionic selective cation-exchange adsorbent has an ionic charge density from 20 to 90 $\mu\text{mol}/\text{ml}$ comprises a sulphopropyl group.

19. (CURRENTLY AMENDED) The method according to claim 15, wherein the sample component is selected from the group consisting of blood and cell culture broths.

20. (CANCELED)